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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,220	09/18/2006	Masanori Hashiba	2418.99US01	7045

7590 07/08/2009
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EXAMINER

BLADES, JOHN A

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,220	Applicant(s) HASHIBA ET AL.	
	Examiner JOHN BLADES	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-4 are pending as amended on 09/18/06.

This is a non-final action following the response of 04/29/09.

Response to Arguments

1. Applicant's arguments, see "Claim Rejections – 35 U.S.C. 103(a)," filed 04/29/09, with respect to the rejection(s) of claim(s) 1-4 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive. In this case, Ikeda et al., which is published on Jan. 20, 2005 which is before the effective filing date of this application which is Mar. 17, 2005, exists as an intervening reference and the previous rejections based on Ikeda et al. are still applicable without *submission of an English translation for the document to which foreign priority is being claimed*. Thus, the previous rejections of claim(s) 1-4 under 35 U.S.C. 103(a) have been maintained.
2. Further, a new ground(s) of rejection is added in view of *Mukai et al.*, JP 09-169897, which provides similar teachings to Ikeda et al.

Claim Rejections - 35 USC § 103

3. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ikeda et al.*, (JPO 2003-184902 or JP 2005-014499) in view of *Imamura et al.*, US 5,605,981 for the reasons stated in the previous Office Action.
4. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Ikeda et al.*, (JPO 2003-184902 or JP 2005-014499) in view of *Imamura et al.*, US 5,605,981 and

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further in view of *Shiraishi et al.*, US 6,150,438 for the reasons stated in the previous Office Action.

5. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mukai et al.*, JP 09-169897 in view of *Imamura et al.*, US 5,605,981.

6. Mukai teaches the compression molding of aliphatic polyester fibers (such as PLA, [0010]) with woody fibers, forming a molded product with high heat strength and minimal environmental load; this molding occurs at a temperature above the melting point of the resin (throughout, see abstract). Mukai does not expressly disclose the use of an *inorganic* filler (such as talc), or holding the product at or near a certain temperature to crystallize the polylactic acid. However, Imamura teaches an embodiment in which “the mold can be heated to a temperature of not lower than the crystallization temperature to positively promote crystallization, making it possible to improve the heat resistance of the product” [Col. 20, 21-26]. Imamura also describes the known practice of adding inorganic materials such as talc to fill out these molded products: “during the formation of sheet or film, an ordinary filler such as inorganic filler (e.g., talc...) and organic filler (e.g., woodmeal) may be incorporated in the material” [Col. 19, 29-32]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the ingredients and temperatures taught by Imamura with the molding method of Mukai. The rationale to do so would have stemmed from a desire to improve the heat resistance of the product [Col. 20, 21-26],

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and it would have been common sense to use a widely-available filler to reduce the cost of making the product.

7. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mukai et al.*, JP 09-169897 in view of Imamura et al., US 5,605,981 and further in view of *Kashiwai et al.*, JP 2001-303489.

8. The teachings of Mukai and Imamura have been detailed above. However, they do not teach the preparation of base material *in a ratio of wood:polymer that ranges from 7:3 to 5:5 by weight*. However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimum or workable ranges involves only ordinary skill in the art. See MPEP 2144.05(II) discussing *In re Aller*, 220 F2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

9. Further, Kashiwai teaches a 6:4 to 4:6 wood:polymer range (abstract) for combining these ingredients that is extremely close to the claimed range. It would have been obvious to one of ordinary skill in the art at the time the invention was made to practice the process of Mukai and Imamura with the amounts of materials taught by Kashiwai. The rationale to do so would have been that this would predictably result in a molded product that corresponds to an appropriate density or cost of materials. Further, it has been held that where claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP 2144.05(I).

Conclusion

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10. Examiner also points to *Gruber et al.*, US 5,773,562 as prior art which is especially relevant to the pending claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN BLADES whose telephone number is (571)270-7661. The examiner can normally be reached on M-Th (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571)272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.B./
Patent Examiner

/KHANH NGUYEN/
Primary Examiner, Art Unit 1791